Ref. No . 3699
072001

ONKYO® SERVICE MANUAL

POWERED SUBWOOFER
MODEL SKW-50

MDD	120V AC,60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBER APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®

IMAGINATIVE SIGHT & SOUND

SPECIFICATIONS

Type	Bass-reflex with built-in power amplifier
Use	For superbass-range reproduction
Frequency response	30-200Hz (at maximum crossover frequency)
Crossover frequency	50-200Hz(variable)
Maximam output power	60W
Input impedance	4.7kohm (for speaker-level input terminals) 12kohm (for low-level inputjacks)
Sensitivity	
Speaker-level	2V
Line	45mV
Speaker	20-cm woofer
Power supply	AC 120V,60Hz
Power consumption	70W
Dimensions(W x H x D)	235 x 490 x 409(mm) 9-1/4" x 19-5/16" x 16-1/8"
Weight	12.5kg 27.6lbs
Accessory	Pin connector cable(1pc.) Spacers(4pcs.) Instruction manual
Other	AUTO STANDBY ON/OFF (with CANCELLING Switch)

SERVICE PROCEDURES

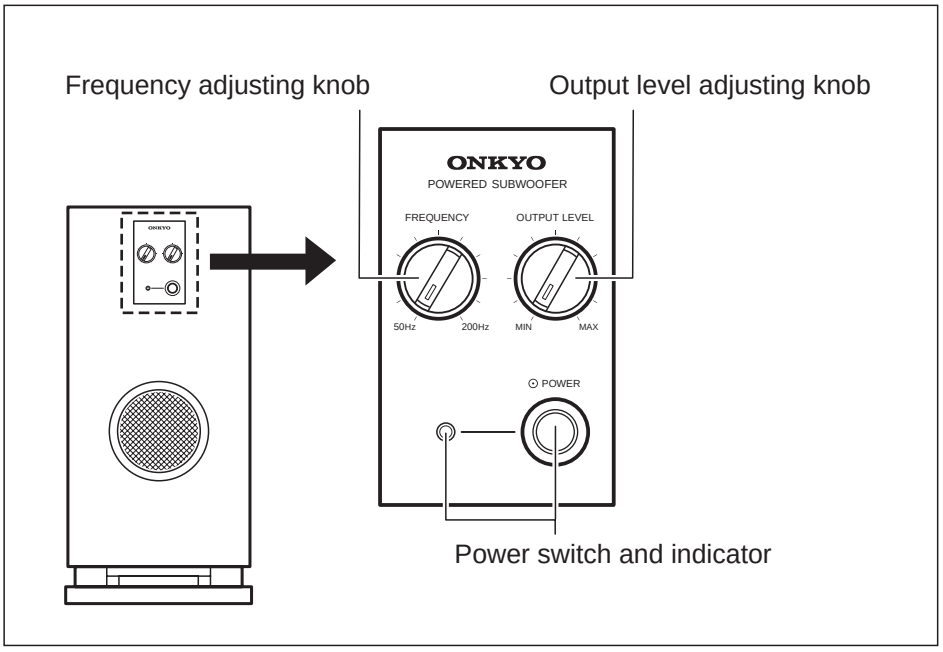
1. Replacing the fuse

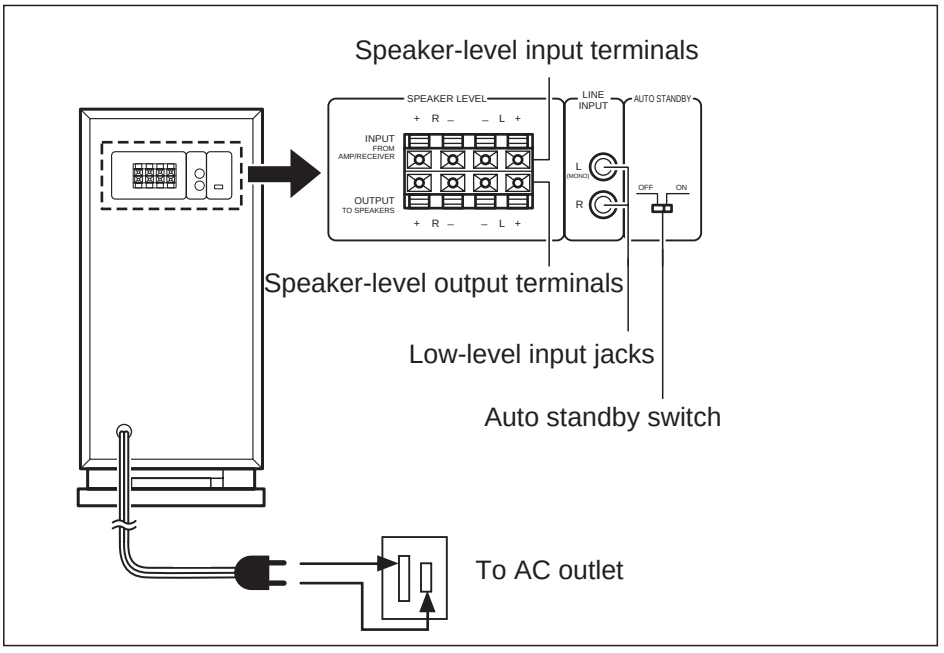
This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utlise est a rapide. Pour une protection permanente, n'utiliser que fusibles de meme type. Ce darnier est la qu le present symbol est appse.

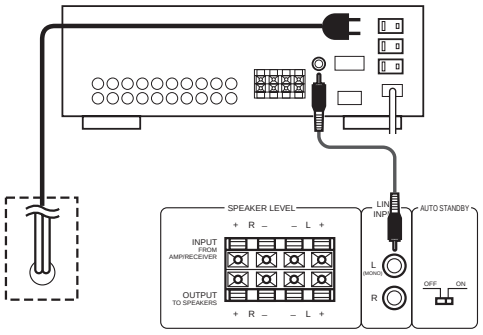
CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252159 or 252253	2A-UL/T237,Fuse or 2A-T/UL-ST2

PANEL VIEW


Frequency adjusting knob
Output level adjusting knob
ONKYO
POWERED SUBWOOFER
FREQUENCY
OUTPUT LEVEL
50Hz
200Hz
MIN
MAX
⊙ POWER
Power switch and indicator

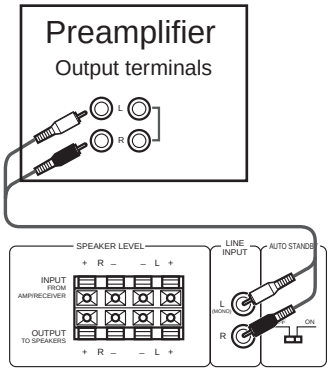

Speaker-level input terminals
SPEAKER LEVEL
+ R – – L +
INPUT
FROM
AMP/RECEIVER
OUTPUT
TO SPEAKERS
+ R – – L +
LINE
INPUT
AUTO STANDBY
L
(MONO)
R
OFF
ON
Speaker-level output terminals
Low-level input jacks
Auto standby switch
To AC outlet

REAR PANEL CONNECTION

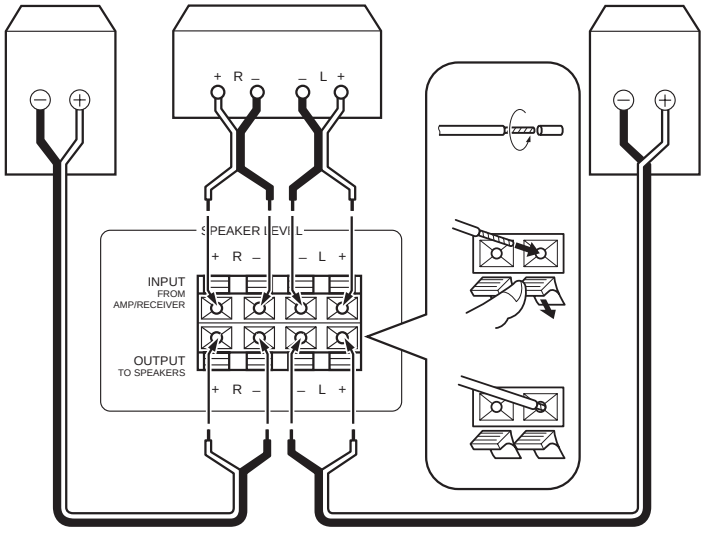


Connection with amplifier's special subwoofer jack

If your receiver(amplifier)is equipped with a monaural subwoofer jack,connect it to the SKW-50 Left (LINE INPUT)jack.

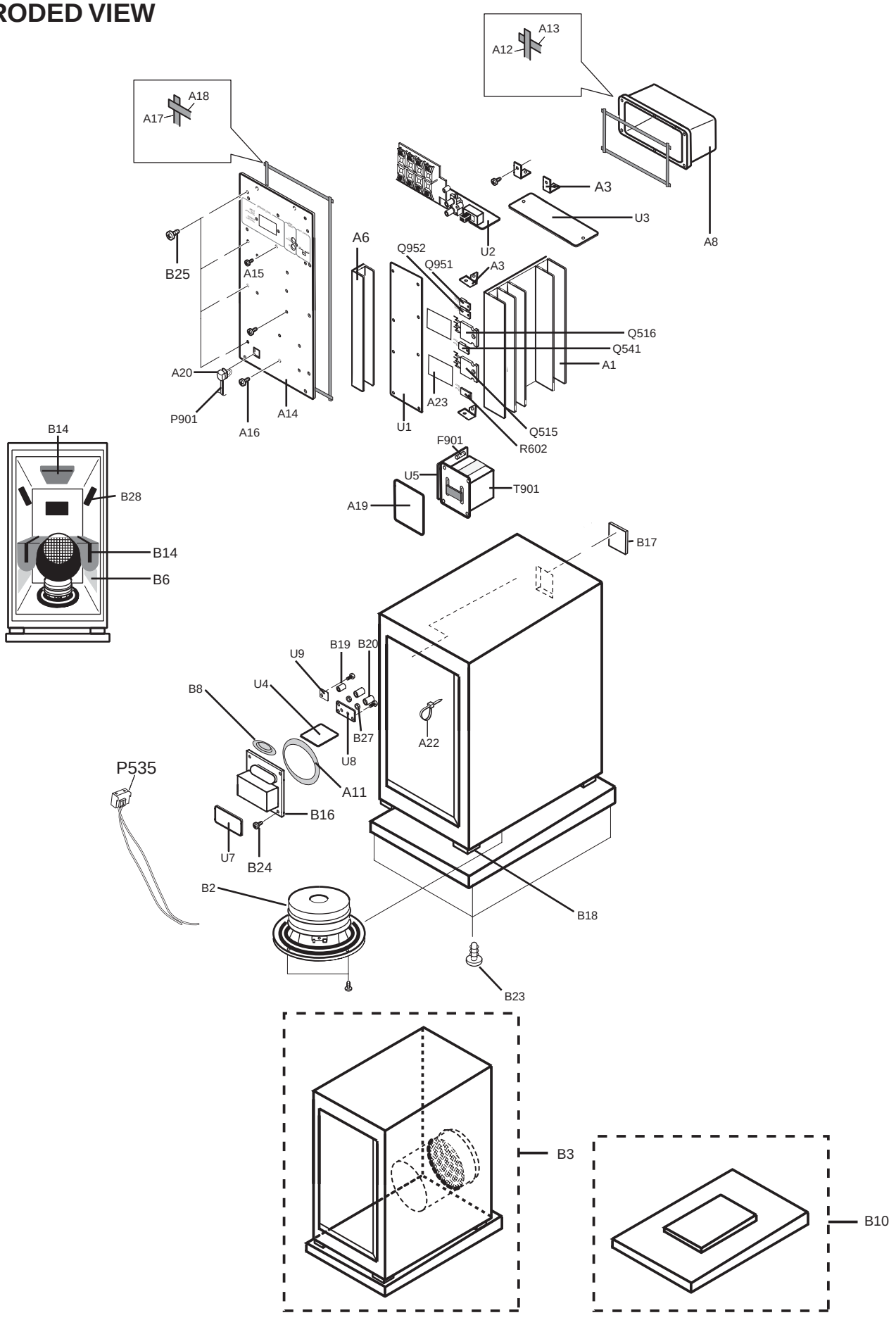


Connection with a preamplifier



Connection with receiver's(amplifier's) speaker terminals

EXPRODED VIEW

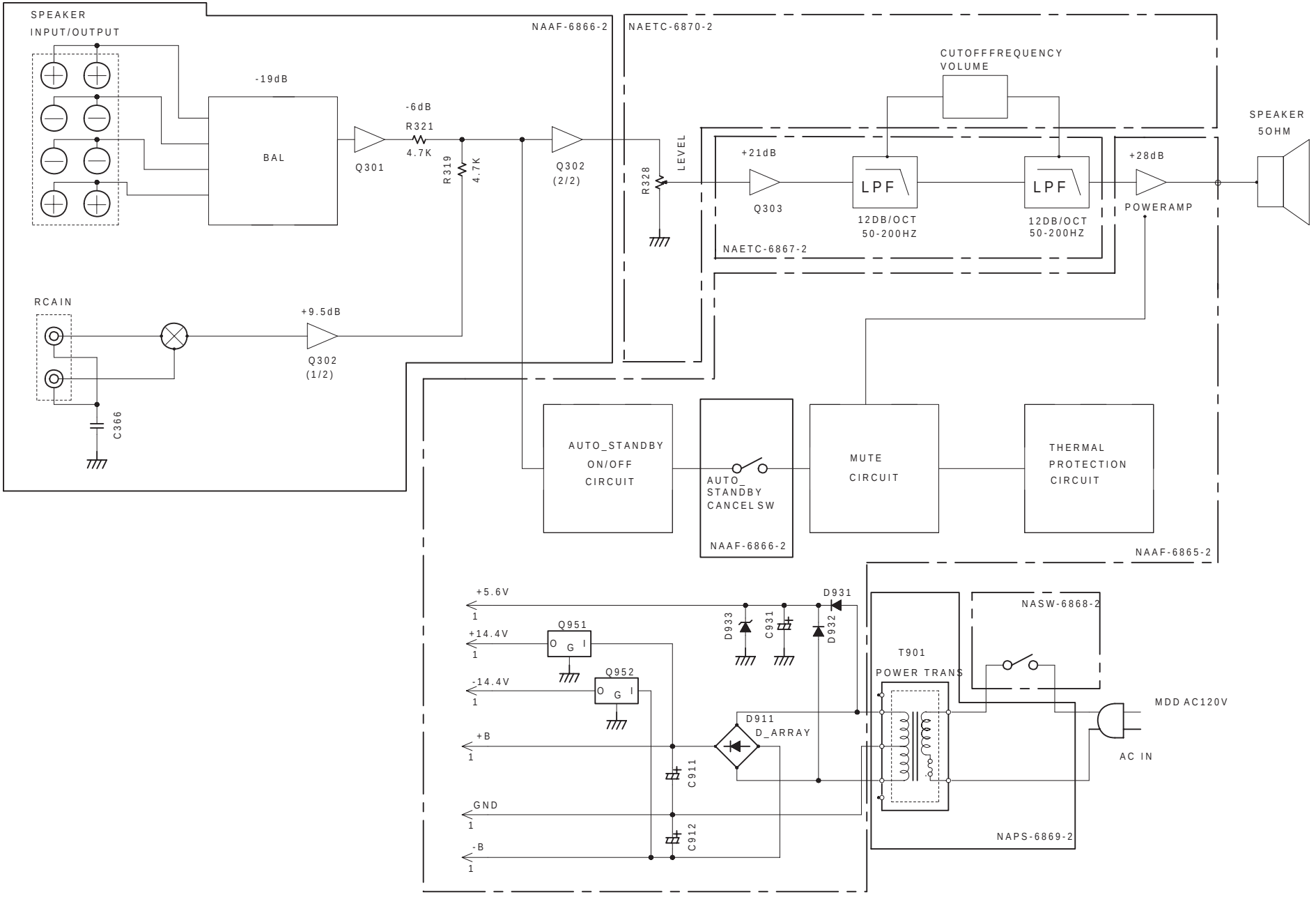


PARTS LIST
EXPLODED VIEW

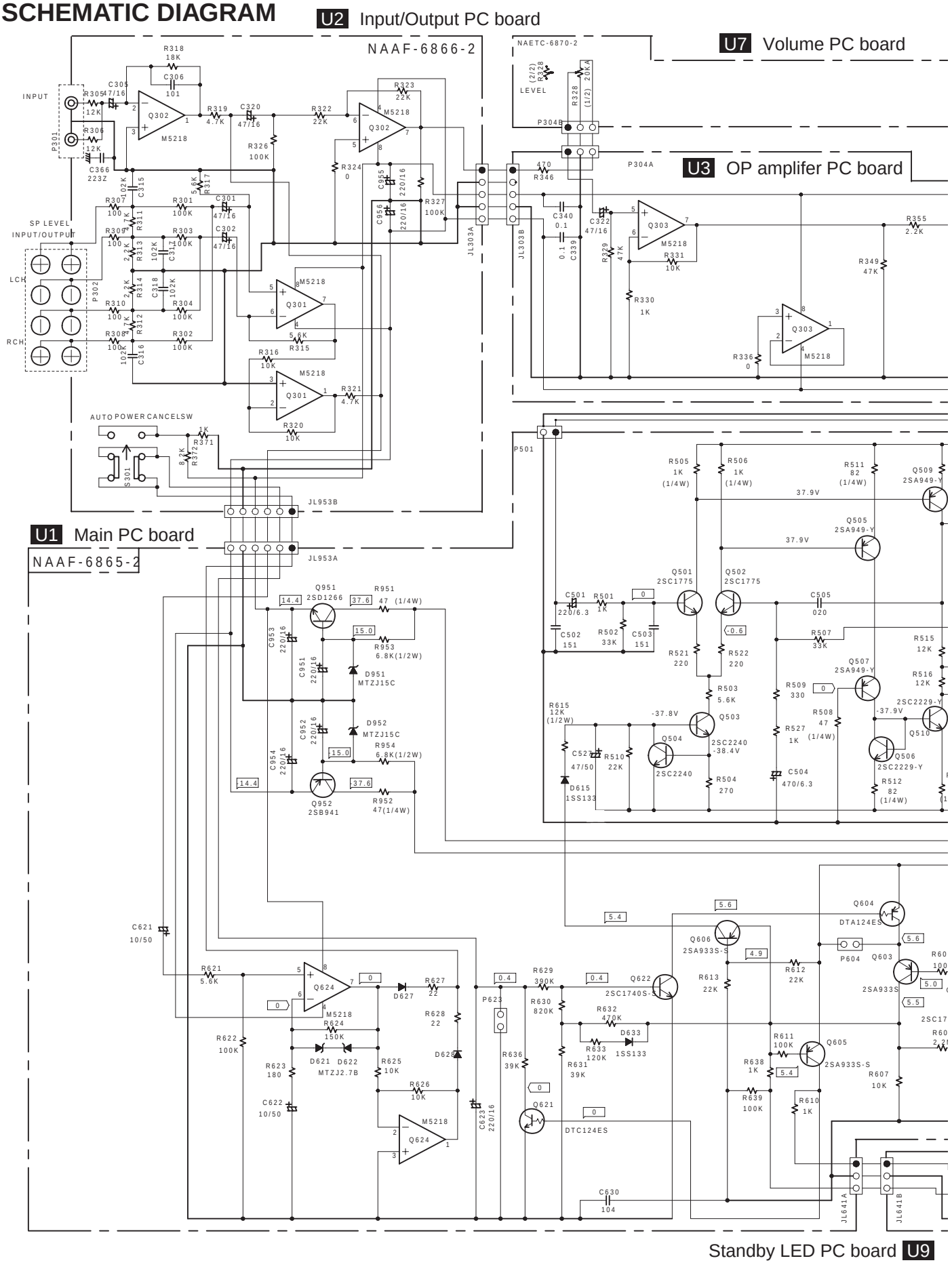
REF NO.		PART NO.	DESCRIPTION
A1		27160467	Heat sink
A3		27130745	Bracket
A6		27141661	Retainer
A8		28184777	Cover
A11		29-100-076-21	Cushion
A12		28141475	t2X5X160,Cushion
A13		28141476	t2X5X80,Cushion
A14		27122895A	Rear panel
A16		830440109	4TTC+10C(BC),Self tapping screw
A17		28141473	t2X5X415,Cushion
A18		28141474	t2X5X195,Cushion
A19		28141334	Cushion
A20	⚠	27301941	Cord,bushing
A22		260208	Binder
A23		223021	TBM-51W 9043,Isolation sheet
B2		W20170A	Speaker ass'y
B3		AZ200003-01	Cabinet ass'y
B7		31-000-038-61	ϕ105-ϕ115 L=195,Paper duct
B8		29-100-076-11	Cushion
B9		51-000-119-01	Box ass'y
B10		AZ000084-01	Base ass'y
B14		54-000-122-01	VHZ 30t*150*150,Sound absorbent
B16		58-000-301-01	Cover
B17		57-000-581-01	Panel
B18		58-000-302-01	Foot
B19		58-000-303-01	Knob(A)
B20		58-000-304-01	Knob(B)
B23		70-015-450-01	ϕ4*50,Self tapping screw
B24		70-015-414-01	ϕ4*14,Self tapping screw
B27		71-079-800-03	Nuts
F901	⚠	252159 or	2A-UL/T-237,Fuse
	⚠	252253	2A-T/UL-ST2,Fuse
P535	⚠	2009990611UL	NSAS-2P0833,Socket
P901	⚠	253272HIT	AS-UC-6#18,Power supply cord
Q515	●	2203063 or	2SC5198-O,Transistor
	●	2203062 or	2SC5198-R,Transistor
	●	2202524 or	2SC4468-Y,Transistor
	●	2202526 or	2SC4468-P,Transistor
	●	2202523	2SC4468-O,Transistor
Q516	●	2203053 or	2SA1941-O,Transistor
	●	2203052 or	2SA1941-R,Transistor
	●	2202514 or	2SA1695-Y,Transistor
	●	2202516 or	2SA1695-P,Transistor
	●	2202513	2SA1695-O,Transistor
Q541		2202104 or	2SC3423-Y,Transistor
		2202103	2SC3423-O,Transistor
Q951		2202754	2SD1266-P,Transistor
Q952		2202764	2SB941-P,Transistor
R602		4000144	PTH9M04-2.2K,Thermistor
T901	⚠	2301487	NPT-1396D,Power transformer
U1		1W204565-2D	NAAF-6865-2D,Main PC board ass'y
U2		1W204566-2D	NAAF-6866-2D,Input/Output PC board ass'y
U3		1W204567-2D	NAAF-6867-2D,OP amplifier PC board ass'y
U4		1W204568-2D	NAAF-6868-2D,Power supply PC board ass'y
U5		1W204569-2D	NAAF-6869-2D,Power transformer PC board ass'y
U7		1W204571-2D	NAAF-6871-2D,Volume PC board ass'y
U8		1W204572-2D	NAAF-6872-2D,PC board for holder
U9		1W204573-2D	NAAF-6873-2D,Standby LED PC board ass'y
B25		70-015-420-02	4 x 20,Self tapping screw

Exchange it for the thing of same HFE rank when you replace the part of the ● mark.

BLOCK DIAGRAM



SCHEMATIC DIAGRAM



Standby LED PC board U9

SCHEMATIC DIAGRAM

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→3pF 330→33pF 331→330pF 333→0.033uF
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPRIVEMENT.

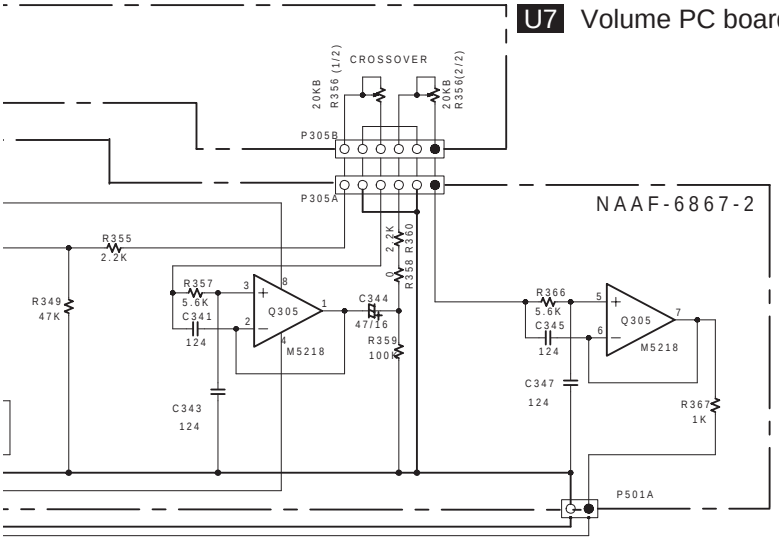
CAUTION

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

ATTENTION

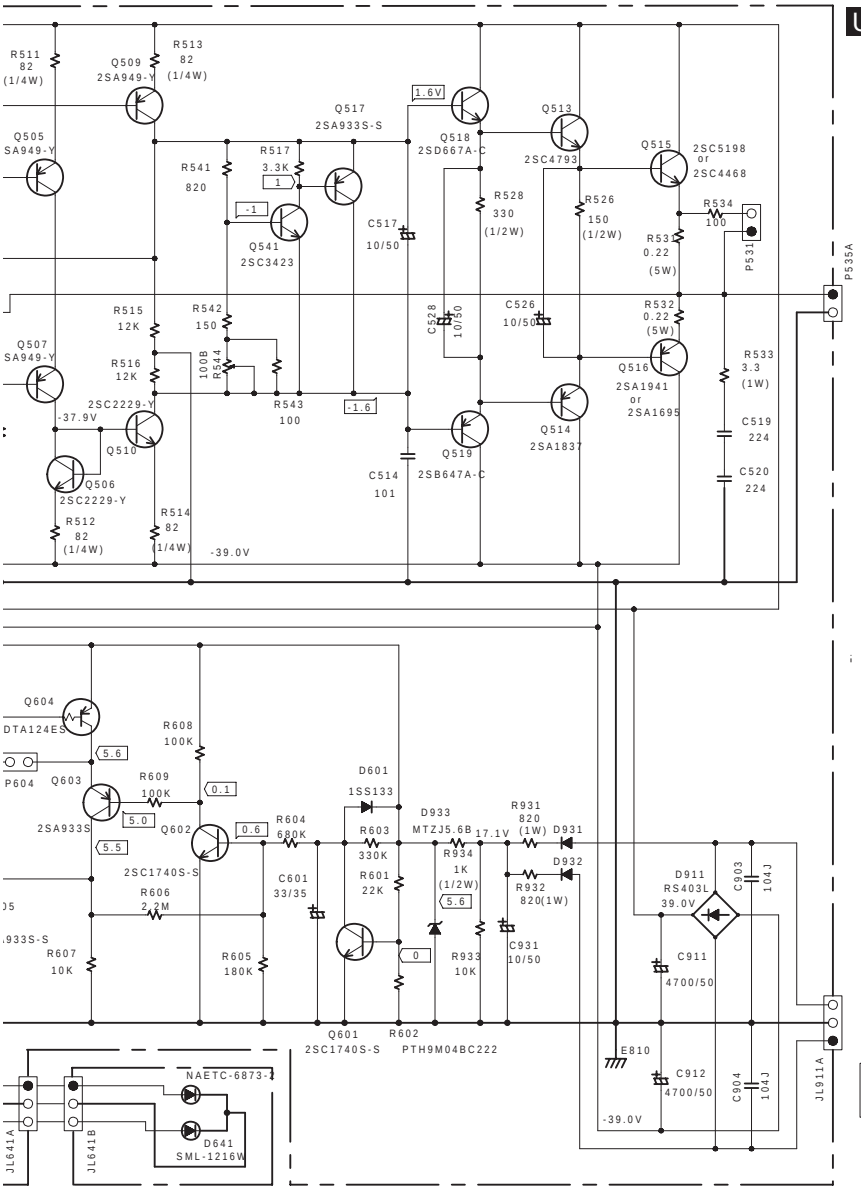
AFIN D' ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENOIE. REPLACER UNIOUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

U7 Volume PC board



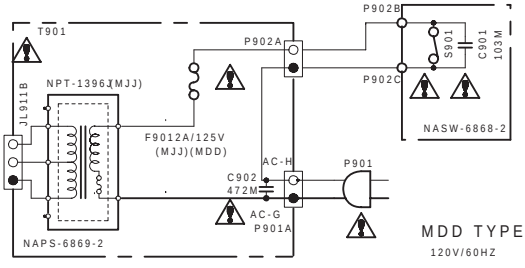
U3 OP amplifer PC board

U1 Main PC board



U9 Standby LED PC board

U4 Power switch PC board



U5 Power transformer PC board

PARTS LIST
PC BOARD 1

MAIN PC BOARD(NAAF-6865-2D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q624	22240369	M5218AP
	Transistors	
Q501,Q502	2210755 or	2SC1775A-E or
	2210756 or	2SC1775A-F or
	2215115 or	2SC1775-E or
	2215116	2SC1775-F
Q503,Q504	2211406	2SC2240-BL
Q505,Q507	2211354	2SA949-Y
Q506,Q510	2211634	2SC2229-Y
Q509	2211354	2SA949-Y
Q513	2202800	2SC4793
Q514	2202790	2SA1837
Q517,Q603	2213354 or	2SA933S-R or
	2213355 or	2SA933S-S or
	2215995	KTA1267-GR
Q518	2215163	2SD667A-C
Q519	2215173	2SB647A-C
Q601,Q602	2213284 or	2SC1740S-R or
	2213285 or	2SC1740S-S or
	2215864	KTC3199-GR
Q604	2215780 or	KRA103M or
	2212600 or	DTA124ES or
	2213580	RN2203
Q605,Q606	2213354 or	2SA933S-R or
	2213355 or	2SA933S-S or
	2215995	KTA1267-GR
Q621	2215810 or	KRC103M or
	2213160 or	DTC124ES or
	2214220	RN1203
Q622	2213285 or	2SC1740S-S or
	2213284 or	2SC1740S-R or
	2215864	KTC3199-GR
	Diodes	
D601,D615	223163 or	1SS133 or
	223205	1SS270A
D627,D628	223163 or	1SS133 or
	223205	1SS270A
D633	223163 or	1SS133 or
	223205	1SS270A
D911	22380021	RS403L
D931,D932	223163 or	1SS133 or
	223205	1SS270A
D621,D622	224470272	MTZJ2.7B
D933	224470562	MTZJ5.6B
D951,D952	224471503	MTZJ15C

PARTS LIST
PC BOARD 1

MAIN PC BOARD(NAAF-6865-2D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q624	22240369	M5218AP
	Transistors	
Q501,Q502	2210755 or	2SC1775A-E or
	2210756 or	2SC1775A-F or
	2215115 or	2SC1775-E or
	2215116	2SC1775-F
Q503,Q504	2211406	2SC2240-BL
Q505,Q507	2211354	2SA949-Y
Q506,Q510	2211634	2SC2229-Y
Q509	2211354	2SA949-Y
Q513	2202800	2SC4793
Q514	2202790	2SA1837
Q517,Q603	2213354 or	2SA933S-R or
	2213355 or	2SA933S-S or
	2215995	KTA1267-GR
Q518	2215163	2SD667A-C
Q519	2215173	2SB647A-C
Q601,Q602	2213284 or	2SC1740S-R or
	2213285 or	2SC1740S-S or
	2215864	KTC3199-GR
Q604	2215780 or	KRA103M or
	2212600 or	DTA124ES or
	2213580	RN2203
Q605,Q606	2213354 or	2SA933S-R or
	2213355 or	2SA933S-S or
	2215995	KTA1267-GR
Q621	2215810 or	KRC103M or
	2213160 or	DTC124ES or
	2214220	RN1203
Q622	2213285 or	2SC1740S-S or
	2213284 or	2SC1740S-R or
	2215864	KTC3199-GR
	Diodes	
D601,D615	223163 or	1SS133 or
	223205	1SS270A
D627,D628	223163 or	1SS133 or
	223205	1SS270A
D633	223163 or	1SS133 or
	223205	1SS270A
D911	22380021	RS403L
D931,D932	223163 or	1SS133 or
	223205	1SS270A
D621,D622	224470272	MTZJ2.7B
D933	224470562	MTZJ5.6B
D951,D952	224471503	MTZJ15C

PARTS LIST
PC BOARD 2

MAIN PC BOARD(NAAF-6865-2D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C501	354722219	220uF,6.3V,Elect
C504	354724719	470uF,6.3V,Elect
C517,C526	354781009	10uF,50V,Elect
C527	354784709	47uF,50V,Elect
C528,C621	354781009	10uF,50V,Elect
C601	354763309	33uF,35V,Elect
C622,C931	354781009	10uF,50V,Elect
C912	3504349	4700uF,50V,Elect
C923	354742219	220uF,16V,Elect
C951-C954	354742219	220uF,16V,Elect
C502,C503	374721515	150pF+/-10%,50V,Plastic
C519,C520	374722244	0.22uF+/-5%,50V,Plastic
C630	374721044	0.1uF+/-5%,50V,Plastic
C903,C904	374731044	0.1uF+/-5%,100V,Plastic
	Resistors	
R533	453630334	RNU1WCJ-3.3
R531,R532	4500018	BPR58FK-0.22
R526	443521514	RS1/2WBJ-150
R528	443523314	RS1/2WBJ-330
R615	443521234	RS1/2WBJ-12K
R934	443521024	RS1/2WBJ-1K
R953,R954	443526824	RS1/2WBJ-6.8K
R931,R932	443628214	RS1WBJ-820
R544	5210359	N06HR100BC
	Clamp	
E812	260224	CP-1S
	Sockets	
JL641	2009990604UL	NSAS-6P0818
P501	2009990602UL	NSAS-4P0815
	Plugs	
JL641A	25055133	NPLG-3P117
P531,P604	25055038	NPLG-2P29
P535A	25055165	NPLG-2P149
P623	25055038	NPLG-2P29
JL953A	25055627	NPLG-6P589
	Holders	
E813	27190608-1	(CRAMP) UA-0 V0
JL911A	25051107	NSCT-3P894

PARTS LIST
PC BOARD 3

INPUT/OUTPUT PC BOARD(NAAF-6866-2D)

CIRCUIT NO.		PART NO.	DESCRIPTION
		ICs	
C301,C302		22240369	M5218AP
		Capacitors	
C301,C302		354744709	47uF,16V,Elect
C305,C320		354744709	47uF,16V,Elect
C955,C956		354742219	220uF,16V,Elect
		Jack	
P301		25045549	NPJ-2PDBL370
		Slide switch	
S301		25065286	NSS-22112
		Terminal	
P302		25060288	NTM-8PDML219
		Holders	
JL303A		25051089	NSCT-5P876
JL953B		25051090	NSCT-6P877

OP AMPLIFIER PC BOARD(NAAF-6867-2D)

		ICs	
Q303,Q305		22240369	M5218AP
		Capacitors	
C322,C344		354744709	47uF,16V,Elect
C339,C340		374721044	0.1pF+/-5%,50V,Plastic
C341,C343		374721244	0.12pF+/-5%,50V,Plastic
C345,C347		374721244	0.12pF+/-5%,50V,Plastic
		Sockets	
P304		2009990672UL	NSAS-6P0935
P305		2009990601UL	NSAS-12P0814
		Plags	
P304A		25055234	NPLG-3P218
P305A		25055237	NPLG-6P221
P501A		25055233	NPLG-2P217
		Wire trap	
JL303B		25055626	NPLG-5P588

POWER SWITCH PC BOARD(NASW-6868-2D)

		Push switch	
S901	⚠	25035550	NPS-111-L512P
		Capacitor	
C911	⚠	3504349	4700uF,50V,Elect

PARTS LIST
PC BOARD 4

POWER TRANSFORMER PC BOARD(NAPS-6869-2D)

CIRCUIT NO.		PART NO.	DESCRIPTION
		Capacitor	
C902	⚠	3300054	DE1310E472M-KH
		Sockets	
JL911B		25050280	NSCT-3P108
P902		2009990603UL	NSAS-2P0817
		Terminal	
P901A		25060092	NTM-1S33
		Plug	
P902A	⚠	25055676	NPLG-2P632
		Fuse holders	
F901A,F901B	⚠	25052133	NSCT-1P2031
		Cover	
C902A	⚠	27301216	SB1925A

VOLUME CIRCUIT BOARD(NAETC-6870-2D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R328	5132475	N14RGL20KA25Z
R356	5132476	N14RGL20KB25Z

STANDBY CIRCUIT BOARD(NAETC-6873-2D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	LED	
D641	225295	SML1216W

ADJUSTMENT PROCEDURES

1. Confirming operations

1－1 Confirming operation of auto standby On/Off

a. Turn AUTO STANDBY switch on.

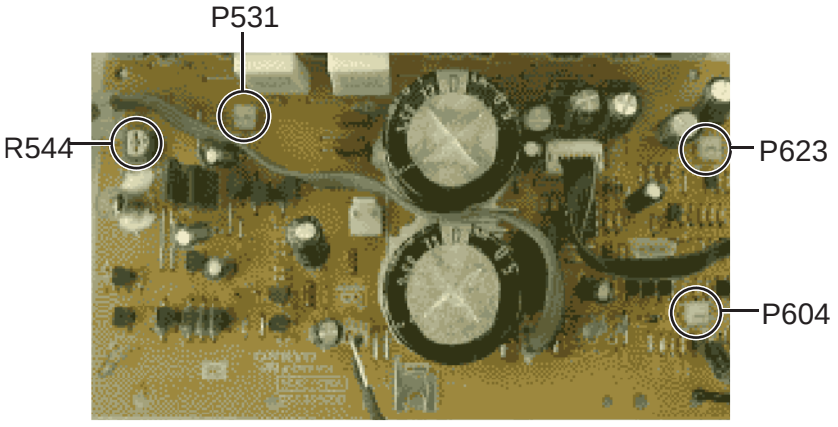
b. After no input condition continues more than 10 seconds, short-circuited the terminal of P604.
Confirm that the indicator changes from red to green.

c. Next short-circuited the terminal of P604.
Confirm that indicator changes from green to red.

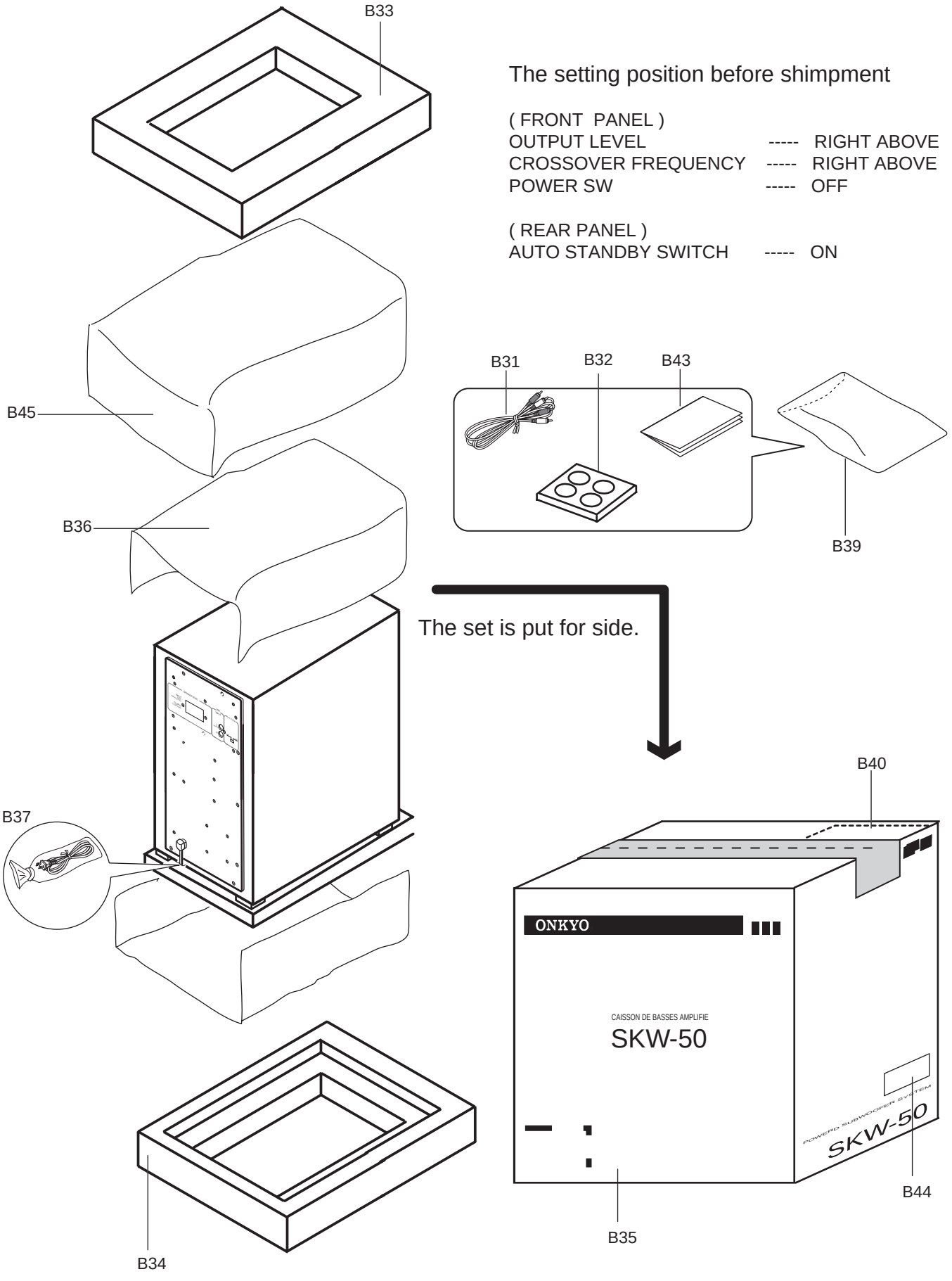
2. Adjustment of idling current

a. Adjust the trimming resistor R544 so that the voltage of P531 becomes 0.25mV.
(Auto Standby Switch is OFF position. No input and no load.)

b. After 5 minuters, read just R544 so that the voltage becomes 4mV.



PACKING VIEW



The setting position before shimpment

(FRONT PANEL)
OUTPUT LEVEL ----- RIGHT ABOVE
CROSSOVER FREQUENCY ----- RIGHT ABOVE
POWER SW ----- OFF

(REAR PANEL)
AUTO STANDBY SWITCH ----- ON

The set is put for side.

PARTS LIST
PACKING VIEW

REF NO.	PART NO.	DESCRIPTION
B31	62-000-394-01	MONO BLACK 3m,RCA Pin cord
B32	65-000-204-01	Foot
B33	80-000-470-01	Cushion
B34	80-000-470-11	Cushion
B35	84-001-923-01	Carton box
B36	85-000-400-11	500x1550x0.5t,Protection sheet
B37	85-000-354-21	Protection sheet
B39	29100097-1A	250x350,Poly bag
B40	29365090	Warranty card
B43	87-000-996-01	Instruction manual
B44	89-000-482-01	Label
B45	85-000-376-61	700 x 950,Poly bag

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ONKYO
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http://www.onkyo.co.jp/